Western Plant Diagnostic Network

Protecting Agriculture in America's Western region ... and beyond

The Western Plant Diagnostic Network

Protecting agriculture in the West is vital to food security in the United States. The Western region represents

- 26% of the US land area,
- 52% of the value of fruit, nut, and vegetable production in the US.

Also, more than 400 different commodities are commercially produced in the west, and every type of climate and biome is found in the region.

Large acreages of corn, wheat, alfalfa, and potatoes also are planted.
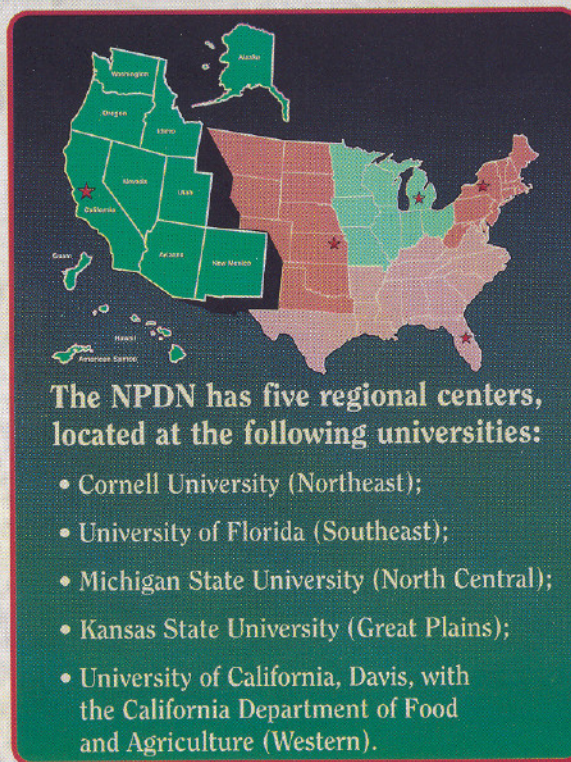
Plant pests, including weeds, insects and diseases, cause extensive annual yield losses to crops. The intentional or unintentional introduction of an exotic pest or pathogen into the Western region could directly increase these losses by causing yield reductions, or indirectly by affecting the quality or marketability of a crop.

The Western Plant Diagnostic Network will help protect these important commodities. The center is based at the University of California – Davis, in partnership with the California Department of Food and Agriculture.

Establishing a National Diagnostic Network

"A coordinated network of regional plant diagnostic laboratories and experts will greatly enhance our capability to respond to intentional and accidental introductions of unwanted pests and pathogens that threaten U.S. agricultural production and security."
— Richard Bostock, WPDN Director

The NPDN has five regional centers, located at the following universities:

- Cornell University (Northeast);
- University of Florida (Southeast);
- Michigan State University (North Central);
- Kansas State University (Great Plains);
- University of California, Davis, with the California Department of Food and Agriculture (Western).

The U.S. Department of Agriculture is creating a National Plant Diagnostic Network (NPDN) made up of experts from the nation's land-grant universities and associated state departments and agencies. The network will provide a cohesive, distributed system to quickly detect pests and pathogens that have been introduced into agricultural and natural ecosystems, identify them, and report them to appropriate responders and decision makers.

Landgrant universities have a long and trusted relationship with those involved in food production. These universities have an existing infrastructure (the Cooperative Extension Service) that interacts closely and rapidly with growers. It makes good sense to capitalize on their expert staff of plant scientists with vast experience in integrated pest management who have well-equipped plant pest and disease diagnostic labs.

The Western Region's Role in the National Network

The Western Plant Diagnostic Network is developing a web-based plant pest diagnostic and reporting system, which will help land-grant personnel submit plant samples, digital images, and detailed crop information for pest diagnosis. Advantages of this system include:

- Rapid evaluation and reporting of potential bioterrorist threats.
- Shorter response time for diagnosis.
- Established links among diagnostic labs in the WPDN and to other labs in the NPDN.
- Established links to regulatory agencies (including the USDA's Animal and Plant Health Inspection Service and each state's Department of Agriculture).
- Better quality and uniformity of information associated with samples.
- Better record keeping and reporting of pest outbreaks.

Federal and state agencies monitor U.S. borders for plant pest introductions and watch for pest outbreaks throughout the nation. Still, new pests do slip past these defenses and enter the country. They are often first detected by those involved in crop production and identified by professionals at land-grant universities and other agencies.

The Western Plant Diagnostic Network will establish a "First Detector" network to help monitor the introduction of new plant pests or unusual pest outbreaks. First detectors are an integral part of the system and include:

- Growers;
- Cooperative Extension Service personnel;
- Crop consultants;
- Pesticide applicators;
- Commercial chemical and seed representatives;
- Master Gardeners;
- Others involved in plant growth or management.

The Western Plant Diagnostic Network will provide training to first detectors on techniques for identifying agro-terrorist threats and procedures for reporting pest problems.

First detectors will have access to the web-based diagnostic system and can report unusual pest occurrences, existing crop conditions or other information not normally submitted through the distance diagnostics network.

First detectors also can subscribe to an agricultural advisory system that provides warning and information concerning pest outbreaks or weather conditions that could trigger outbreaks.

For more information on this program, visit the Web site at:

http://www.wpdn.org

Western Plant Diagnostic Network

The Western Plant Diagnostic Network is one of the keys to our Homeland Security effort to protect agriculture in our nation. It is one of five regions in the National Plant Diagnostic Network.

Members include the states of Alaska, Washington, Oregon, Idaho, California, Nevada, Utah, Arizona, New Mexico, and Hawaii, and U.S. territories in the South Pacific.

2004   DN-5